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ABSTRACT

A study program and test collection project was recently completed by the Clearinghouse for Applied Performance Testing at the Northwest Regional Educational Laboratory (NWREL). The project focused on two separate, but related, objectives: compilation of self-study programs leading directly to certification or licensing and development of a survey of occupations to provide both general and specific information on licensing and certification procedures for those occupations in which vocational competence is determined through examination. To determine the availability of certification tests, NWREL staff contacted over 1,000 potential information sources by telephone, first-class mail or personal interview. University and municipal libraries provided available written references, while three computer searches supplied abstracts of significant educational and vocational articles. Overall, the information solicitation phase was judged successful. Adequate information was available on all occupations and programs NWREL wished to include in the compilation, and the information received appears to cover the majority of existing occupational examination processes. (Author/MV)

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A Survey of Current Practices In Occupational Certification and Licensing Testing

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BACKGROUND INFORMATION

A study program and test collection project was recently completed by the Clearinghouse for Applied Performance Testing at the Northwest Regional Educational Laboratory (NWREL). This work was sponsored by the United States Office of Education at the request of the Defense Activity for Non-Traditional Educational Support (DANTES).

The project focused on two separate, but related, objectives: compilation of self-study programs leading directly to certification or licensing and development of a survey of occupations to provide both general and specific information on licensing and certification procedures for those occupations in which vocational competence is determined through examination.

PROCEDURES

Information Solicitation and Collection

To determine the availability of certification tests, NWREL staff contacted over 1,000 potential information sources by telephone, first-class mail or personal interview. University and municipal libraries provided available written references, while three computer searches supplied abstracts of significant educational and vocational articles.

The telephone information search yielded mixed results. In some cases, project personnel were already aware of the existence of an appropriate course or examination procedure, and the telephone call was merely a request for more detailed information. Phone calls in such cases were quite effective. But when a call was made to determine the existence of an appropriate program, it often proved less helpful.

Calls to state and municipal government agencies were particularly ineffective, possibly because of the large size of those agencies and the extensive division of responsibility among agency staff. On the other hand, most professional organizations and Federal agencies had specific, well-established programs and were therefore capable of providing adequate, complete information with minimal delay and confusion.

At the start of the project, reference materials were needed to provide information for the occupational survey entries. In addition, it was necessary to determine what previous work had been done in

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relevant fields. Two federal publications of obvious value--The Dictionary of Occupational Titles[1] and the Military Civilan Job Comparability Manual[2]--provided information useful in preparing the compilations. However, The Occupational Outlook Handbook[3] was the project's most useful reference. Its entries not only contained descriptions of the nature of the work and training requirements for each occupation, but also listed sources of additional information. Project staff used these listings to check the completeness of information they collected. The Handbook often provided general information which was not immediately available from other sources.

A few additional references were used. The Dictionary of Professional and Occupational Licensing in the United States[4] and Equivalency and Proficiency Testing[5] were useful references against which the completeness of the DANTES occupational survey could be checked. Other references provided addresses for organizations, state agencies and unions.[6,7,8,9] Occupational Licensing: Principles and Practices[10] offered an indepth study of current licensing concepts and processes. No other references were found which provided information directly related to project development goals.

Computer literature searches were conducted by NWREL Information Center personnel using the ERIC, AIM (Abstracts of Instruction Materials) and ARM (Abstracts of Research Materials) systems. Several hundred references and their abstracts were obtained through these searches, but only a small percentage of the titles were appropriate, and the large majority of those provided only minimal information. Most references related to apprenticeship or manpower programs, or to individualized vocational programs in the educational setting. In summary, the computer searches were useful only in providing background information.

The project's mailing program was the most valuable method of collecting information. A form letter was sent to a wide variety of agencies, organizations, and individuals who might have information to contribute. Information on both independent study courses leading to licensure or certification and the licensure or certification procedures themselves was requested.

Project staff took special care to develop a mailing list which thoroughly covered the broad spectrum of potential information sources. The original mailing list selection procedures are outlined below.

1. State Governmental Agencies. For each state, approximately five agencies who might have relevant information were selected from the 1974-75 National Directory of State Agencies.[7] Selections typically included Departments of Education, Commerce, Labor, Consumer Affairs, and so forth. Slightly over 300 contacts were made through this procedure.

2. Other Governmental Agencies. Several municipal and federal agencies were contacted. In a few cases the intent was to gather general information, but more often it was to obtain information about specific known procedures. It was for this latter purpose that the licensing divisions of the Federal Aviation Administration, Federal Communications Commission, and the United States Coast Guard were contacted. Fewer than ten agencies were contacted within this group.

3. Home Study Schools. All member schools of the National Home Study Council were contacted. (Letters were not sent to schools listed as subsidiaries or divisions, but in all cases the parent organization was contacted.) Other correspondence schools listed in Lovejoy's Career and Vocational School Guide[8] were also contacted. In all, 100 schools received the information request.

4. Colleges and Universities. All of the approximately 75 member schools of the National University Extension Association (NUEA) received the information solicitation.

5. Companies. A request for information was sent to each of the 100 largest United States industrial corporations specified in the appropriate 1975 Fortune Magazine Double 500 listing.

6. Labor Organizations. Through examination of the 1974 National Trade and Professional Association's Yearbook[6] the names of approximately 70 labor unions were obtained; organizations which were, from name, presumed to be labor unions were selected from a listing of groups reporting annual budgets of over $1,000,000.

7. Professional and Trade Organizations. This category originally contained 70 organizations which were selected because they seemed potential sources of relevant information. The selection was made on the basis of information from the Occupational Outlook Handbook[3] and Lovejoy's Career and Vocational School Guide[8] as well as prior knowledge of the project staff.

8. Other Groups and Individuals. The solicitation letter was also mailed to a small number of potential contributors who did not fall into one of the groups listed above. Names of such organizations and individuals were often suggested during the course of phone calls or were listed in relevant references and materials. These contacts--less than 15 in all--included professional educators knowledgeable in the vocational licensing field and a small number of centers for vocational education or research.

The form letter used to solicit information asked that the recipient provide project staff with names of additional contacts who might provide relevant information. Many did so, providing NWREL with over 100 additional information sources. It was the policy of project staff to follow up on all suggested contacts--occasionally by phone, but more frequently through use of the same solicitation letter. State agencies most often provided these followup contacts; when the original agency was an inappropriate source of information, their response usually contained the suggestion of a more probable source. Frequently the state agency itself forwarded NWREL's letter to a different government department.

A few individuals and universities and several professional organizations provided suggestions for additional information sources. Responses from state governmental agencies and from professional and trade organizations were generally supportive of the project objectives; therefore, such organizations often attempted to provide sources of information when they themselves were unable to help.

Table 1 summarizes the scope and success of the information solicitation phase in each of the classifications described above.

In general, information provided by state governments was wide ranging, but seldom detailed enough to be of significant value. There were exceptions, however, as some states had previously compiled single sources of complete information on licensed occupations within the state.

Most information provided by colleges and universities took the form of printed extension service catalogs and bulletins; this information was detailed but not particularly applicable. Their response rate was moderate. Few companies or labor organizations responded and those which did provided no important information. Response from home study schools was also very low.

The few non-state government agencies contacted responded well to specific information requests. Professional and trade organizations were usually able to either provide useful information and appropriate information sources, or state that the information requested did not exist. Their response rate was fairly high, and the detailed booklets, pamphlets and brochures provided by those organizations were instrumental in providing both occupational and examination information.

Overall, the information solicitation phase was judged successful. Adequate information was available on all occupations and programs NWREL wished to include in the compilation, and the information received appears to cover the majority of existing occupational examination processes.

Table 1

MAILING LIST CONSTRUCTION AND RESPONSE

Classification	Original* Contacts	Subsequent* Contacts	Total* Contacts	Total*# Responses
State Governmental Agencies	300	75	375	175
Other Governmental Agencies	5	0	5	5
Home Study Schools	100	0	100	5
Colleges and Universities	75	5	80	25
Companies	100	0	100	5
Labor Organizations	70	0	70	5
Professional and Trade Organizations	70	30	100	50
Other Groups and Individuals	10	5	15	5
TOTAL	730	115	845	275

* All figures are approximated slightly.

\# This category tabulates all written responses received, including materials, information, suggestions for additional contacts, and statements that information was not available.

PROJECT FINDINGS

Evaluation of the Information Collected

The results of the information search permit some observations concerning licensing and certification procedures and related independent study courses. These observations are supported by the thorough nature of the project's information collection process; however, until verified by widespread empirical research, they must be regarded as tentative.

Numerous independent study courses, covering a wide range of subject areas, are available. Proprietary schools, colleges, universities, junior and community colleges, and various professional and trade organizations all offer self-study, correspondence coursework. Courses range from elementary through post-graduate levels, and cover everything from highly practical skills like welding to theoretical science and math. Project staff readily identified several thousand such courses.

Yet very few of these courses lead to recognition of achievement through award of certificate, license, or academic degree. Most individual courses are apparently intended to increase knowledge or skill in one restricted area; seldom are they coordinated to form a total "program." Project staff therefore realized that very few independent study courses were suitable for inclusion in a catalog of self-study programs--particularly a catalog of programs providing preparation for certification or licensing examinations. A few programs offer "preparation courses" for real estate, accounting, engineering, or other professional examinations. In addition, the American Watchmaker's Institute has a self-study course and related certification test in watchmaking and a few proprietary schools have curricula which lead to various licenses--notably Federal Communications Commission permits. Yet it would probably be correct to state, if our sampling is representative, that not one of a hundred independent study courses is directly related to a licensing or certification examination.

Colleges and universities provided a large part of the independent study information. Even so, their response rate was not as great as anticipated. Even more surprising was the very small response received from home study schools. Of more than a hundred schools contacted only five responded. Clearly home study schools have materials available for dissemination. Therefore, project staff concluded that either the schools offered no courses appropriate for inclusion in the survey, or perhaps the compilation procedures, the sponsoring body, or some other aspect of the project made program evaluation unattractive to the majority of these organizations. The DANTES decision not to include proprietary schools in the compilation eliminated the problem of obtaining information from these sources.

Project staff were considerably more successful in compiling examination information. Although state governmental agencies were

seldom able to provide information about tests with nationwide applicability, these agencies were often able to supply fairly detailed information on requirements for a few occupations within a particular state (e.g., plumbers in Washington, elevator inspectors in Maine). Though they were usually unable to generalize licensing requirements to other states, that is not to say that the contacts were not useful. The large volume of responses often made it possible for project staff to make required generalizations themselves. As previously mentioned, among the most helpful contributions were the compilations received from about ten states. These documents were very valuable in developing survey entries on the licensed occupations.

Companies and labor unions provided almost no input to the compilation; the few that did respond offered no relevant information. However, various supplemental readings and interviews suggested that most company programs were actually not appropriate for the survey in any event, since they were not available nationwide, nor were they available to people outside the employ of a specific company. Labor unions could have provided much information regarding how union membership and journeyman status constitute a type of certification--a concept which affects several million workers in union-oriented trades. However, such information was outside the focus of the compilation. The response rate from companies and unions was so low that it is logical to conclude that many requests did not reach appropriate sources in the first place (because of inadequate addresses), or that none of these sources had any pertinent information.

Most useful information came from the various professional organizations, who provided all certification and a substantial amount of licensing information used in the compilation.

Comments on Licensing and Certification

Many occupations are in some way regulated by state, federal, or local governmental agencies; such regulation is generally termed licensing. Licensing requirements most often originate through specific legislative action. When a professional organization, rather than the government, sponsors the regulatory process, it is called certification. Certification procedures are most often used to determine the occupational competence of workers, and to identify those who do not meet minimum standars. Completion of the certification process advertises a worker's abilities to employer, colleagues, and customers. (A few occupations offer credentialing through the use of a national registry; qualified personnel receive recognition through listing in a directory available to co-workers and employers. This study found no difference between the intent or effects of the registration procedure and that of certification.)

Certification provides some assurance that a worker has met certain minimum standards in the field. This is not to say that only certified personnel are competent. There are a wide variety of reasons (including cost and opposition to the certification concept) why qualified personnel may choose not to be certified. Nor is the value of certification consistent; certification plays a very important role in some fields, while in other fields, it has almost no impact on obtaining, maintaining, or improving employment opportunities.

It should be remembered that, regardless of its importance, certification is ultimately a voluntary process, while licensing procedures, no matter how unrelated to occupational proficiency, are (at least in concept, if not in enforcement) mandatory. A vast number of licensing procedures have developed over the years, some to protect the public welfare, but many as revenue producing or registration procedures, or means of restricting entry into a particular occupation to the benefit of current members. During the survey compilation project staff found such wide variation in licensing requirements for the same occupation from state to state that "necessary occupational competency" (as ascertained by licensure) cannot possibly be equivalent throughout a licensed trade or profession. The study Occupational Licensing: Principles and Practices[10] deals in depth with questions related to the value of, need for, and potential for improvement in the current maze of governmental licensing procedures.

Certification is always nationally uniform in character, while state licensing (especially outside highly professional occupations--such as law or medicine) is generally unstandardized and inconsistent. While licensing is a mandatory process, it was not within the scope of the project to determine how closely licensing requirements relate to job tasks; the disparity among states' requirements suggests that there is reason to question that relationship. Although certification procedures seem more logical (due in part to their uniformity) there is some question regarding the value and necessity of the process. Once again, that question lies outside the project's focus.

TENTATIVE CONCLUSIONS DERIVED FROM THE PROJECT WORK

Project staff have reviewed a great amount of information in the preparation of the DANTES documents; that review allows the formation of several tentative conclusions related to occupational certification and licensing. Various references and interviews with a number of individuals and organizations provided ancillary information which helped in formulating and substantiating some of these conclusions. It would appear that a wide variety of practices and concepts in occupational credentialling could benefit from additional evaluation.

1. With only a few exceptions, independent study courses do not seem to allow completion of a comprehensive program of study without a significant amount of additional non-independent training, either in the form of supervised job experience or institutionally-based educational coursework. It is generally impossible to obtain licensure or certification solely, or even primarily, through the completion of self-study courses. Most independent study programs, even those which result in degrees or educational certificates, do not relate directly to any type of licensing or occupational certification program. Any attempts to compile listings of these "directly-related" courses will be limited, as was the NWREL effort, by the apparent small number of existing programs. With the exception of several proprietary school courses, project staff are aware of only one totally appropriate program, the University of North Carolina's correspondence course in dental assisting. This non-credit course is approved preparation for the American Dental Assistant's Association certification test. A few other programs (less than five) are somewhat appropriate for consideration.

2. Considering the vast number of occupations, only a small number have any type of competency-based examination procedure which clearly evaluates a person's ability to satisfy occupational responsibilities. Over 2,000 occupations have licensing or certification procedures of some sort, but only a fraction of these involve demonstration of the applicant's competency through examination.

3. In some occupations (notably the building and industrial trades) and on some job sites, labor unions have, in a variety of ways, greatly influenced job entry requirements. This employment-limiting process is similar in effect to licensing or certification procedures. Various readings and interviews suggest that unions are typically in favor of maintaining current processes rather than encouraging increased criteria-related competency testing as a measure of a worker's skills.

4. The information collected indicates that most states sanction educational institutions as "licensing agencies;" graduation from a training institution accredited in a given field often satisfies a large portion of the licensing requirements. (As an obvious example, no amount of experience or successful examination performance will allow one to become a physician without graduation from an approved medical school. This procedure affects many occupations, from law and dentistry to barbering and dry cleaning.)

5. Ability to gain employment or advancement in a field can rarely be predicted solely on the basis of satisfying certification or licensing qualifications. Credentialling usually varies in importance, depending on an individual employer, geographic location, job market, and so on.

6. Only a very limited amount of research seems to have been done in the area of occupational licensing and certification. Of particular concern is the complex issue of how closely certification or licensing relates to actual job competency and what benefits are derived from the existence of these processes.

7. Many governmental agencies and some professional organizations welcome attempts at compiling and examining certification and licensing procedures. Most communications to the project staff were supportive of the DANTES undertaking.

8. Many states have not centralized or even identified occupational licensing information in a manner which would make it relatively easy to obtain answers to general or specific licensing responsibilities; it is far more common to find anywhere from ten to fifty separate departments and boards each maintaining responsibility for one, or several, related occupations. The project staff often had difficulty locating an appropriate information source within the state government; it is likely that this situation would create difficulty or inconvenience for those seeking assistance with routine licensing problems.

9. The certification procedure often seems to be primarily an attempt by current members of an occupation to increase the professionalism and status of their field. Certification procedures are, in almost all cases, initiated from within an occupation rather than by any outside legislation or group action. Certifying agencies occasionally mentioned the need to bring increased recognition to successful practitioners of an occupation and/or to maintain high standards of competency within the field.

10. Certification is most predominant in the allied health occupations. It is hypothesized that this is partly due to the importance and highly technical nature of the work performed (which makes both "recognition" and "maintenance of standards" viable rationales) combined with the obvious need to protect the public welfare. Certification is a significant part of many health fields; salary, advancement potential, and even ability to obtain work in the first place are, because of employer acceptance of the certification concept, often dependent on successful completion of the credentialling process.

11. State licensing requirements vary so greatly that it is easy to question the validity of the criteria on which they are based. For example, 1,000 hours of classroom instruction are required for a cosmetology license in Texas, while 1,800 hours are required in Arizona. Does this imply that the cosmetologists in Arizona are considerably better qualified, or that the training in Texas is significantly more effective? More likely it suggests that the requirements themselves are somewhat arbitrary, that they are not the result of a systematic pairing of the skills with the curriculum. Information collected for the survey revealed a multitude of such discrepancies; in only a few licensed occupations was there substantial uniformity among state licensing requirements.

12. Information collected suggests that licensing and certification tests may not generally be constructed under the same rigid criteria which would be used for educational tests of equivalent importance. In all the test descriptions examined, project staff found no mention of validity or reliability checks. Test procedures were often not standardized. Perhaps most significant was the fact that testing in many occupations was of the norm-referenced type in which a candidate must obtain a percentile score which exceeds a specified "passing" score before being granted the credentials. These cutoffs frequently seemed unrelated to any competency-based criteria and appeared extremely arbitrary. Several occupational examinations have been developed under rigorous criteria that help ensure their appropriateness and value. Yet many other tests do not necessarily succeed in determining the true competence of the candidate. They are seldom rigorously constructed tests with a strong correlation to a proven set of essential abilities. Many appear to have been established solely as a result of legislative pressures, or the opinions of members of the occupation regarding how much a person should know about what topics. Such persons hold informed opinions, to be sure, but tests constructed without empirical justification for their content may be considered a significant weakness in the overall credentialling process.

This is in no way meant to imply that these tests are inappropriate--their appropriateness is a question which requires extensive research before even tentative conclusions can be drawn. Nor is it meant to suggest that the test developers were not qualified. The implication is simply that few licensing or certification agencies can empirically demonstrate that their credentialling tests do indeed differentiate between individuals on the basis of occupational competency.

In conclusion, this project has gathered a wide variety of information in the field of occupational licensing and certification. Yet because this area has not been extensively investigated, additional research would seem to be in order.

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